

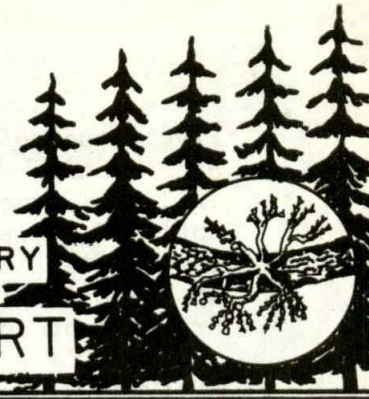


U.S. FOREST SERVICE

NORTHERN REGION

DIVISION OF STATE AND PRIVATE FORESTRY

INSECT AND DISEASE REPORT



Report No. 71-6

5230

STATUS OF BARK BEETLE INFESTATIONS NEAR BLUE MOUNTAIN,
MISSOULA DISTRICT, LOLO NATIONAL FOREST, MONTANA

by

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ABSTRACT

Extensive pine engraver, Ips pini (Say), infestations occur in ponderosa pine stands near Blue Mountain. A mountain pine beetle, Dendroctonus ponderosae Hopk. infestation occurs in Hayes Creek. A potential for increased bark beetle activity in 1971 exists in the area.

INTRODUCTION

Groups of dead and dying trees indicative of bark beetle activity, were detected and reported by district personnel during February 1971, in second growth ponderosa pine stands near Blue Mountain, Missoula District, Lolo National Forest. An evaluation was made March 1-4, 1971, by examining a number of these areas to identify causal agents, potential for increased losses and recommend control action.

CAUSAL AGENTS

Pine engraver beetle, Ips pini (Say) was the primary causal agent in areas examined. Infestations were restricted to the crown in most cases and the lower boles were either uninfested or contained secondary infestations of mountain pine beetle, Dendroctonus ponderosae Hopk. or the western pine beetle D. brevicornis Lec. Trees top killed by I. pini ranged in size from 5 to 18 inches DBH and averaged 10.6 inches. The largest group of trees top killed by Ips occurred in O'Brien Creek. This spot contained about 60 trees.

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Five groups of ponderosa pine in Hayes Creek were killed by mountain pine beetle. These contained 33 trees killed in 1969 and 28 killed in 1970. Broods are, for the most part, in the late larval stage. Ratio of increase is presently 4 brood to 1 attacking adult, indicating a potential for at least the same level of infestation in 1971. Approximately seven additional groups of dead or dying ponderosa pines are present in lower Hayes Creek, but these were not examined.

ENVIRONMENTAL FACTORS

The ponderosa pine stand in the Blue Mountain area is about 80 years old and contains portions which are overstocked. Bark beetle activity tends to be concentrated in the overstocked areas. The pine engraver prefers green slash but summer broods can become aggressive and attack standing trees, particularly if they are under a moisture stress or overstocked.

Commercial thinning operations in the area are providing an abundance of green slash, a favorable habitat for I. pini buildup.

LOCATION AND INTENSITY OF INFESTATIONS

Areas where mountain pine beetle is the primary causal agent seem to be presently restricted to the Hayes Creek drainage. Pine engraver beetle infestations are scattered throughout the ponderosa pine type in the vicinity of Blue Mountain. Pine engraver activity in the Blue Mountain area is part of a larger infestation which extends throughout the Clark Fork Drainage from Rock Creek east of Missoula west to St. Regis, Montana, and south to the West Fork Drainage of the Bitterroot National Forest (figure 1.)

DISCUSSION AND RECOMMENDATIONS

There is no practical direct means of pine engraver beetle control. Trees which now have faded foliage no longer contain broods. These broods are overwintering in the litter and will probably attack green slash in the spring. A reasonably effective means of managing pine engraver beetle populations is to provide a continuous supply of slash during thinning operations. This is particularly important in June and July during the second flight period when the beetle tends to be somewhat more aggressive and will attack standing trees.

Direct control of mountain pine beetle infestations will temporarily protect the ponderosa pine stand in Hayes Creek. If direct control is undertaken, priority should be given to removal of infested trees by commercial sale and destruction of bark and slabs at the mill site. This is the most economical direct suppression method available. If removal by commercial sale is not feasible infested trees can be cut and burned. Direct control should be completed before mid-June, when the overwintering brood begins to emerge. The stand in Hayes Creek should be thinned to a more desirable stocking to afford long term protection of resource values.

LOLO National Forest WEST HALF



Other Bark
Beetle Infestations
Bark Beetle Infestation
Blue Mountain
Missoula Ranger District
Lolo National Forest
1970



Figure 1 - Bark Beetle Infestations, Lolo National Forest

